

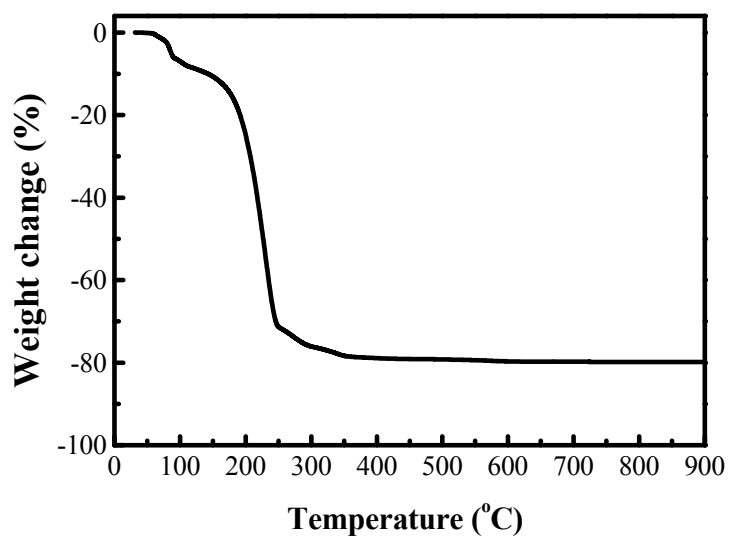


Figure S1. TGA data of LiPF₆ powder. The measurement was performed at a heating rate of 5 °C/min under a nitrogen atmosphere.

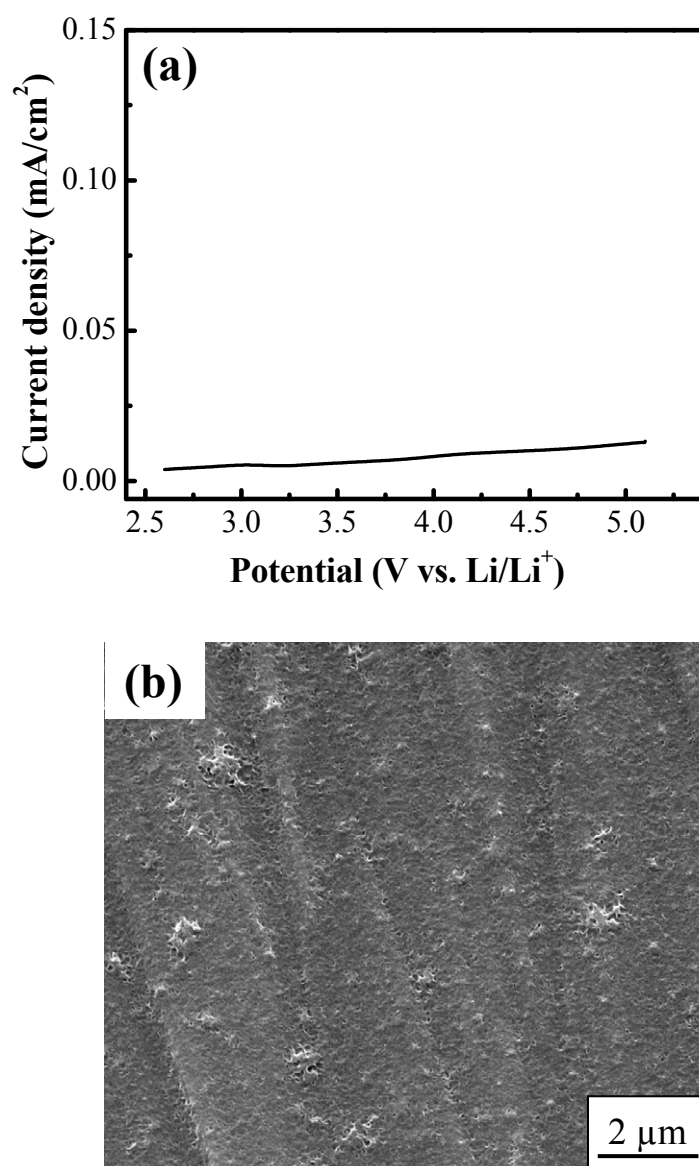


Figure S2. (a) LSV profile of Al current collector performed in BMP-TFSI IL with a mixed Li salt (0.4 M LiTFSI/0.6 M LiPF₆) at 50 °C. (b) SEM image of the sample after the LSV test.

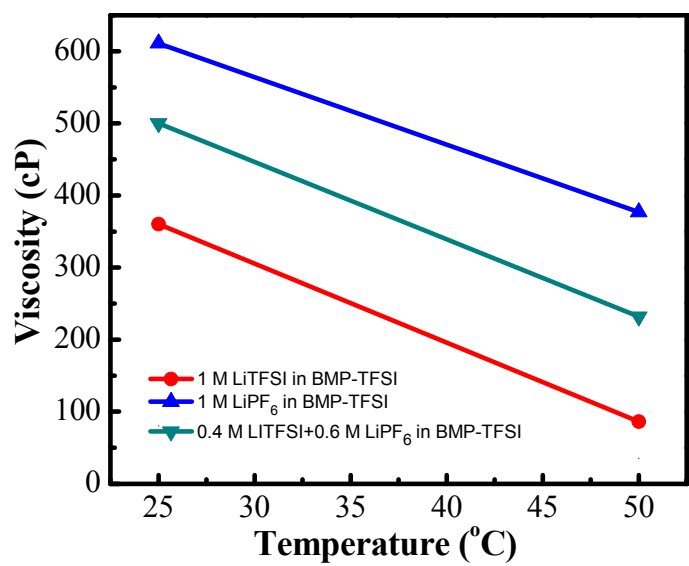


Figure S3. Viscosity values of the IL electrolytes measured at 25 °C and 50 °C.

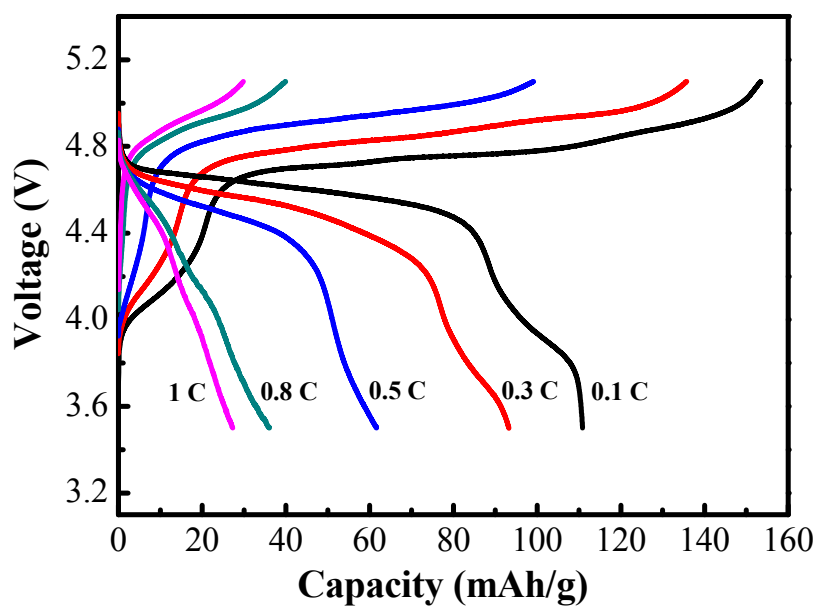


Figure S4. Charge-discharge voltage profiles of Li/LiNi_{0.5}Mn_{1.5}O₄ cell with mixed-salt (0.4 M LiTFSI/0.6 M LiPF₆) IL electrolyte recorded at various charge-discharge rates at 50 °C.